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Electricity on the Farm

A MONTHLY MAGAZINE FOR THE UP-TO-DATE RURAL FAMILY

WHAT IS YOUR TITLE FOR THIS PICTURE? (See inside back cover for rules and cash prize contest.)

In This Issue

: December : 1937 :

When a Woman Gets to Wishing—Turkey Factory—Refrigerated Farm Storage—Blossoms on Schedule—and other regular features.

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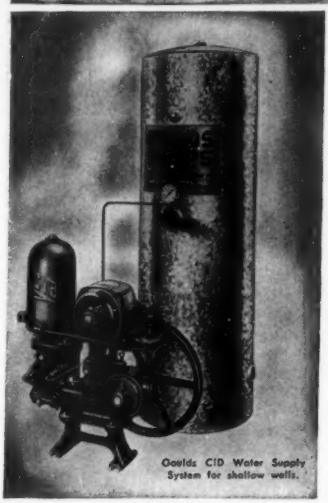
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Editor's Chat

PLANNING

Corn's in the crib. Fruit is in the jars. Mow is full of hay. Snow's coming.

This is the time of year when there is a little less work and a little more time to meditate. It's good planning weather. Have you ever planned for electricity? Planning for electricity will pay as good returns as the planning for fertilizers, fences or next season's crops. It will soon be time to start incubators, warm up the brooders, install the soil heating cable. Is the old equipment ready to use? Will it pay to buy new?

Sit down some rainy day and think over the many jobs and operations you do on the farm and in the farm home. What does it cost to do them now with coal oil, with gasoline, with teams or with hired help? Feed grinding, hay hoisting, milking, milk cooling, pumping, plant growing, brooding, cooking may all be done electrically. Many people are doing it, and doing it because it pays. Make a fair calculation. You may be surprised at what it is costing to perform these operations now and how economically and with what satisfaction you could do them with electricity. It is a good time of year to get out the pencil and make plans.

STRAIGHT FURROWS

Recently I attended the International Plowing Match at Fergus, Ontario. Never before have I seen such straight furrows. Never before have I seen so many nearly perfect furrows. And never before have I seen such a large group of farm folks who were so keenly interested in a farming operation—and such a common, homely one—just plowing. Fields were laid out on either side of the highway for a mile. In one, an ox team was plowing. In a dozen others were teams of horses with single bottoms, gang plows, sod turners and stubble plows. Still further along were tractors—all the newest models with the latest types of plows. Ox, horse and tractor moved along slowly, steadiiy, pulling sleek plows, guided by skilled and practiced hands, turning straight furrows.

The symbol of the plowman was not only a plow but a yardstick. No contestant was without his ruler, and furrows were exact in width and depth. Lands were finished with a precision where inches counted. Bob and Bess, the old farm team, were adorned in their best harness with oiled straps and shining buckles. Running boards and farm wagons bore favorite plows with just the right set, and as well tuned as Babe Ruth's bat.

Classes for boys were prominent in the program; and the boys were there with their sweethearts, dads and mothers.

But why all the fuss about plowing. Well, the International Plowing Match is an old institution. One of its chief purposes is to develop pride in farming. It is stiff competition. The winner of a contest has reason to be proud. But to be a good plowman in a contest, one must be a good plowman at home. The boy who takes pride in his plowing at home is not likely to do slovenly planting and cultivating. With good plowing, good planting and good cultivating there is better prospect for good crops and a stimulation of pride in the farm and farm home.

Electricity was also at the Contest. Exhibits of electrical equipment for good farms and good homes. And what better place could there be for electricity than with those farm people who are striving to do things better, who have pride in the farm, who are "plowing straight furrows" toward progress.

GEORGE W. KABLE.

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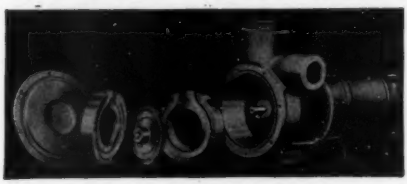
WESTCO *the Original Turbine Pump*

Your city cousins won't have a thing on you with your home electralized and equipped with a WESTCO WATER SYSTEM, the WORLD'S SIMPLEST and MOST EFFICIENT PUMP. Say, won't it be great to just turn a faucet when your stock needs water, when you want to bathe or shave, when your wife wants to wash clothes and dishes? Your family will be happier, healthier, and all will feel more like living—you'll have more time for the important things you've always wanted to do, and time for pleasure, too.

The WESTCO has only one moving part—the all-bronze impeller—no metal-to-metal contact. It's silent, efficient, gives faultless performance . . . lifetime service. It has no gears, springs, valves, belts, leathers, plungers—none of the objectionable trouble-making moving parts that cause pounding and hammering, that impair the performance, and cut down the life of the pump.



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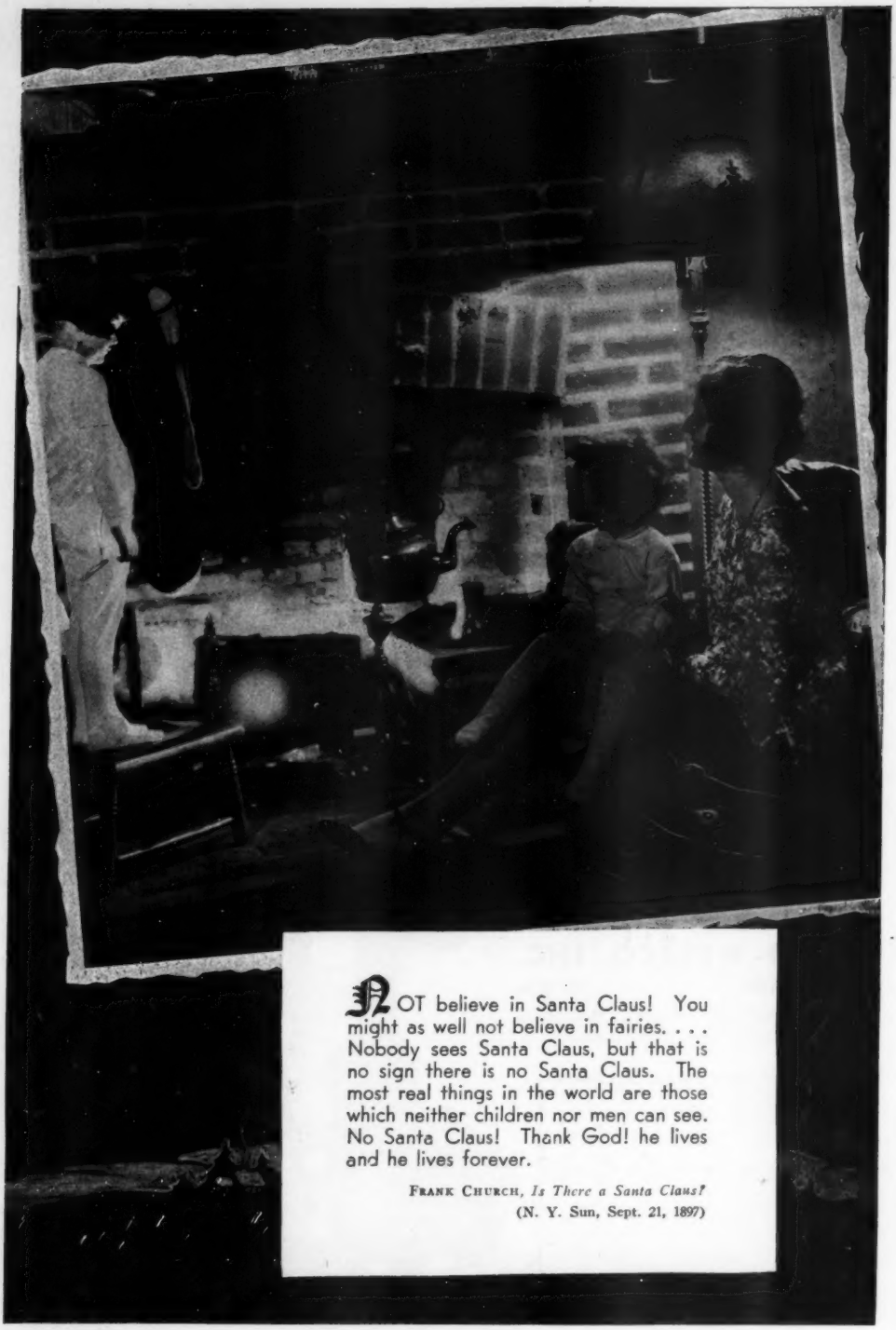
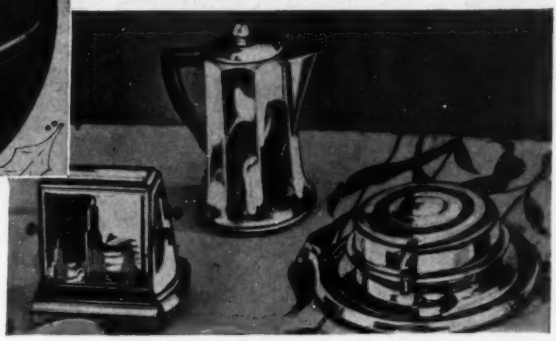


NOT believe in Santa Claus! You might as well not believe in fairies. . . . Nobody sees Santa Claus, but that is no sign there is no Santa Claus. The most real things in the world are those which neither children nor men can see. No Santa Claus! Thank God! he lives and he lives forever.

FRANK CHURCH, *Is There a Santa Claus?*
(N. Y. Sun, Sept. 21, 1897)

Left: A roaster to share with the family.

Below: For the folks who want to make waffles,—and have good coffee with them. With the toaster thrown in for some who haven't one.



When a Woman Gets to Wishing

By GAIL MEREDITH

IT wasn't very long ago that I heard a busy mother say when her daughters implored her to tell them what she wanted for Christmas: "Oh, my dears, just give me a kiss, so I won't have to dust it."

The women I know are going a step farther with their Christmas wishing this year. It isn't enough, they think, to get something that won't make more work; they want something that will save them work. And the women you know, your neighbors along the copper highway where electric current runs, have pretty shrewd ideas about making electricity do it.

Last February a good many women wrote me letters about the jobs they hate most. There were all kinds of things women do not like to do, from washing windows to planting corn, but among this jumble of jobs, I found half a dozen they could easily turn over to electricity.

Women don't like to iron, they said, because standing is hard work. Hear that Santa Claus? If you know a woman who talks that way, you know a place to take an ironing machine that will iron her clothes while she sits down in front of it.

There were lots of women who did not like to carry in wood, or carry out ashes, or clean the stove and keep a fire. Tut! Tut! Wouldn't it be nice if those women, the whole kit and bilin' of 'em, could wake up on Christmas morning to find that an electric range had stopped those bothers in their kitchen forever?

Then there were Florence Gunn of Okemos, Michigan, and Mrs. Frost of Cattaraugus, N. Y., and Mrs. Newman of South Carolina, and Mrs. Baker up in North Carolina, and Mrs. Helmer in Wisconsin, and Mrs. Reed in Texas, to say nothing of some three or four men and boys who got into the contest when I wasn't looking, all of them alike in their distaste for pumping and carrying and emptying water. If that is the job they hate most, Santa Claus, what are you going to do about it?

There is no use pretending you can't think. They know perfectly well that a good water system will take care of that job for them. It isn't as though it were something they had to do, because there is no other way to get it done. How about it? Will you put a water system in their stockings on Christmas morning?

Dishwashing, a Much Disliked Task

Eleven women, scattered from Maine to Texas, said that above all things they abominated washing dishes. There you are. Check them off your list. A dishwasher for them delivered not later than Friday afternoon, December 24th.

Of course Santa Claus, I know just what you mean by rattling your hands in your pockets and turning the skimpy little things inside out. But you can't stop a woman's wishing that way! If you are sure you can't manage it, just let me read you part of a letter from Mrs. Gertrude Ottman of Cobleskill, N. Y. She can teach you a thing or two about getting things done.

Mrs. Ottman wants a water system, and she'd like it for Christmas, but she is a reasonable person so if you feel that you can't manage, listen to the way she's got it worked out.

"We are just ordinary farm people," (I don't believe it for a minute, but that's what she says) " and never think of spending a large amount on gifts; but I have a plan all worked out. Here it is: Each one of the adult members of our family, five in all, is to save the money which he is planning to spend on gifts for the others. That would be the price of twenty gifts. Then we will pool the money and in that way start a "Water System Fund." After a fund is once started, it is easier to keep it growing. We won't have our water system this year and possibly not next, but each one will have a part in helping to secure it. Everyone will enjoy running water in the home. Each will be fully repaid for any sacrifices he makes."

I have never been very good at waiting myself. I rush impatiently at the thing I want. I'm sort of like one of the men in the office where my husband works. When he wants anything, so the men who work with him say, he always wants it yesterday afternoon. That is why I have a great respect for quiet planning and patient waiting for the achievement of the good we desire. I am hoping Mrs. Ottman's family will start the fund this very Christmas.

A Variety of Wishes

When it came right down to telling what they'd like for Christmas, there were women who were wishing for a range and women who want a refrigerator. There were women who still long for a washer, and folks whose sewing machines are wearing out. There were women who want a coffee maker, and those who'd like a toaster best. Women's ideas do run to food, don't they? One woman tells Santa Claus that if she had a mixer to help, she just knows she could build up a considerable business in selling cakes and the like.

Out in Everett, Washington, Mrs. Anna F. Schick needs a mixer to do the hard work for her good right arm. "Five years ago on Christmas day my first baby was born," she writes, "and since then I have had a great deal of trouble with my right hand and arm; there seems to be no strength in it. The gift that I would like for Christmas to help me most with my hand and arm would be a mixer and all its attachments. It would certainly take a great deal of work from my hands such as making butter, creaming cakes, mashing potatoes, whipping cream, and beating frostings. I make about three and four cakes a week and churn twice. We don't have mashed potatoes as often as we'd like to as I don't have the strength to make them light and fluffy.

"Every year it has been payments here and payments there and generally the smallest items are the hardest to get, and still most of the time they are the most useful.

Upper: For the woman who doesn't like to stand and iron. Mrs. Earl Morrow of Pierrepont Center, New York, is trying out her new ironer.

Center: A water system sends water running to the kitchen sink.

Lower: See the smiles, Santa. That much wanted sewing machine.

Above: It's a Merry Christmas in the kitchen where a woman no longer has to build fires or carry wood, or empty ashes.

Below: To hang on the Christmas tree for the woman who asked Santa Claus for a refrigerator.

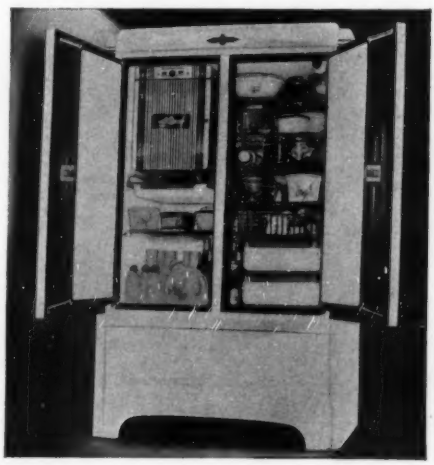
"If you've ever wanted something very, very much, you'll know how I feel. It certainly would be a gift that would be a treasure to me and I'm still hoping I'll receive it some Christmas."

Mrs. Arthur McNeish of Grove City, Pa., wants a waffle iron so dramatically that I can hardly wait for her to get it. I'll bet she has been saving waffle recipes for years. Listen:

"I have long cherished a desire for a waffle iron, a good one with the little signal lights to tell when the waffles are done. I'm sure there could be nothing more appetizing on a cold winter night than a waffle supper. The amber coffee would be bubbling in the electric percolator, sending off a tantalizing odor. On the dining table the waffles would be crisping in the new waffle iron, a plate of golden butter nearby, and a pitcher of yellow cream waiting to join forces with the coffee. I'd have a goblet of maple syrup for the waffles, too, and little sausages sizzling in the frying pan. For dessert there is a brown betty pudding.

"This is a dream menu which will come true when I get my waffle iron for Christmas."

Can you resist that, Santa Claus?



Mrs. Murdock had her Christmas list all ready for Santa Claus and when she wrote her letter for our recent letter contest, she juggles her desires back and forth and decides she wants—oh, well, read it for yourself and see what Mrs. Murdoch's Santa Claus is in for.

"Long before you asked," she wrote, "I knew I wanted either an electric sewing machine or an electric roaster, and now that you have asked, I will have to decide which, for I know that *my* Santa Claus is not able to provide both!

"I love to sew and do all of my sewing. I also do lots of mending on the machine. My machine is 38 years old and though it is becoming temperamental with age, it is still serving me faithfully. It has earned my respect by its long service, but it is becoming hard to pedal and occasionally does a hop-skip-and-jump in stitching. A new, smooth-running electric sewing machine is what I want.

"I don't like to cook. I am never sure of the results of my attempts. Roast meat is my particular weak point, and a particular favorite of my husband. If I had an electric roaster I am confident I could serve meat cooked as it should be cooked, and make an improvement on any other foods cooked in it. Then I might learn to cook. I want an electric roaster.

"Getting the sewing machine would be selfish, as I would get all of the pleasure from using it. I can still use the old one. If I get a roaster, my husband will get as much pleasure from it as I, and since he is my Santa Claus, I'll take the electric roaster."

Now I ask you, when a woman gets to wishing, can't she make a job of it?

More power to her Santa Claus!

TURKEY FACTORY

By BEN MAXWELL

A MODERN, electrically operated turkey hatchery, that reminds visitors of newspaper Sunday supplements wherein visionary artists and writers depict mass production of life by efficient laboratory methods, is owned by W. W. Rutherford and his son, Earl on R. F. D. No. 7, Box 414, at Salem, Oregon. Here, in a commercial and custom hatchery with an egg capacity of 43,200, Mr. Rutherford and his son are doing a profitable business hatching poults selling from 35 to 40 cents apiece and costing less than .001 of a cent each to electrically hatch over a 28 day period of incubation.

Mr. Rutherford's experience in the turkey business dates from 1932 and is the story of an enterprising farmer who refused to be depressed by the depression. The small fruit market was demoralized and dairy products were selling below cost of production when he entered the turkey business as a side line five years ago.

Acquired Prize Winning Stock

To start with, he acquired 80 Narraganset poults of prize winning stock. Some of these he retained; others he sold at an encouraging profit the first year. For the next three years his flocks increased as the markets expanded, but in 1935, when his flocks consisted of hundreds of egg-producing hens, he decided to make a change.

"I'll either do my own hatching or get out of the turkey business," Mr. Rutherford decided.

So, in 1936, an incubator with a 7200 egg capacity was obtained. It was a good and efficient incubator; in fact, such superior poults were hatched in this electrically operated machine that the demand was greater than the capacity of the incubator to supply. Besides, Mr. Rutherford now had 800 laying hens of his own and it was a problem to care for the daily average of 650 eggs that they were producing.

After only one season of use, the smaller unit was discarded in favor of three larger incubators and a hatcher so completely modern in appearance and operation that some of Mr. Rutherford's customers are speaking of it as "Rutherford's Turkey Factory."

Two of these incubators have an egg capacity of 14,400 each, and a smaller unit accommodates 9,600. Total incubator capacity is 38,400 turkey eggs. Naturally, great care is taken to select only perfect eggs for incubation. They must be of proper weight, there must be no round eggs, no double yolks; indeed, no deformities of any kind.

To check with hatcher capacity, four weeks are taken to fill these incubators. Each week the incubators are filled to one fourth capacity with 9,600 eggs and marked with a distinctive colored ticket to designate the lot.

For 24 days the incubated eggs are electrically warmed and humidified by thermostatically controlled heat and moisture. Week in and week out, over the entire period of incubation, he rests assured that a precision thermostat will keep heat within the incubators between 99½ and 99¾ degrees, a temperature variation of less than one-fourth of a degree. He knows, too, that moisture will ke kept at 85 degrees by a humidifier automatically controlled over a one degree range.

Then, after 24 days of incubation, the eggs are

Left: Good morning world! No hiding in wet grass for me. My mother is an electric turkey. And my hospital bill was only one-tenth of a cent.

Right: Just 14,400 prospective young holiday dinners in this electrically heated and humidified incubator.

removed and carefully candled for fertility. Repeated tests have shown that Mr. Rutherford's flocks supply the electric incubators with eggs having a fertility running above 90 per cent.

Fertile eggs are immediately placed in a hatcher of 4,800 capacity and here they remain in compartments holding 100 eggs each until the poults begin to emerge from the shell some 72 hours later. The hatcher is filled on a semi-weekly schedule to meet the incubated egg supply.

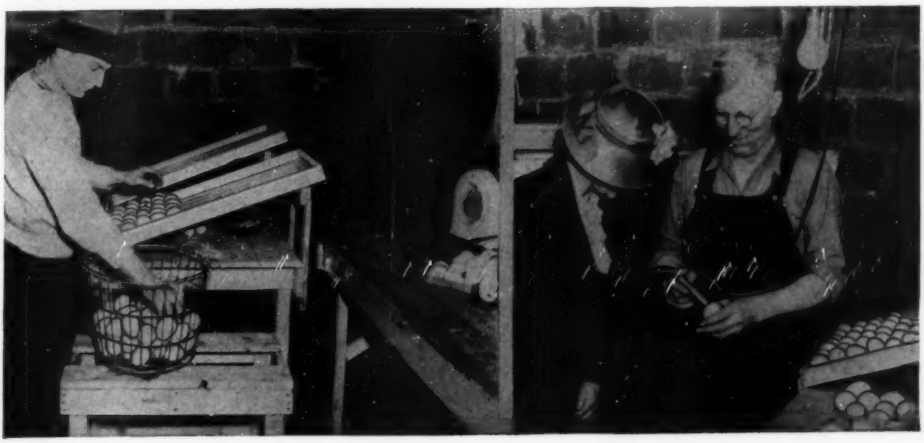
Exacting heat and moisture conditions resulting in a 70 to 80 per cent hatch are regulated from a panel that relieves the owner of a turkey hatcher of much anxiety and loss of sleep.

Two very sensitive thermostats activate two mercury switches that not only control the heating elements but also start the ventilator motor and open the draft door to keep the temperature down during the last day of hatching. A lamp lights when the heating elements are on while another lamp indicates when the humidifiers are working.

Electrical operating costs for the entire hatchery are less than $40 a month. Forty dollars a month for operating three incubators and a hatcher of 43,200 egg capacity and two 1,320 watt heaters used to keep room temperature within the hatchery at 70 degrees! And that includes plenty of electric light for illumination, too.

Left: At right is one of two 1320 watt electric heaters used to keep the work room comfortable.

Right: Mr. Rutherford looking into the "family prospects" with an electric candler.



COBBING THE CORN CROP

By E. W. LEHMANN

Cylinder sheller at rear and small hammer mill in front, both operated by a 5 HP. motor on the farm of E. D. Lawrence, McLean County, Illinois. Spouts, and the blower on the mill save much of the labor of handling the shelled and ground corn.

MANY practices are followed in shelling and grinding corn in different parts of the United States. On the corn belt farm where several thousand bushels are produced each year, most of which is sold, the general practice is to have a custom sheller come to the farm.

Some farmers, however, who have corn as a main crop, find it more satisfactory to shell the corn at different times through the year when the market is favorable and it is convenient to shell and deliver. Under such circumstances a sheller of 100 to 150 bushels an hour capacity driven by a 5 horse power electric motor will make it possible for the corn grower to take advantage of favorable weather, labor and marketing conditions and be independent, as far as getting this job done is concerned. Another point in its favor is that such equipment saves work for the women by making it unnecessary to cook for a large shelling crew.

Mr. Paul Butlin, a farmer in Champaign County, Illinois, whose principal crop is corn, says: "We find our small sheller a great convenience because we use a lot of ground corn for the poultry throughout the year." It is also generally found in feeding pigs that shelled corn in a self-feeder results in less waste of feed and a reduction in the cost of pork production.

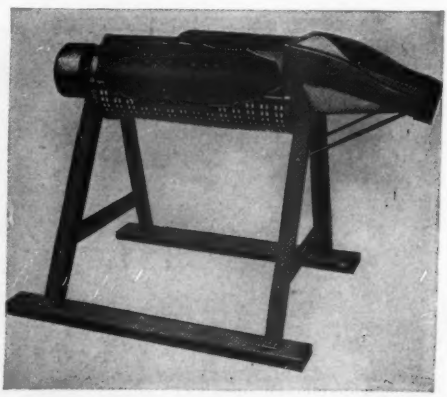
Mr. Butlin's sheller is of the cylinder type, with a capacity of about 100 bushels an hour. It requires two men to operate it—one to scoop the ear corn into the sheller and the other to scoop the shelled corn into the wagon. When the crib is full, the corn is allowed to run directly into the sheller, thereby reducing labor. Such shellers can also be equipped with either elevators or blowers for delivering the shelled corn without labor.

The cylinder sheller is very simple in construction, containing few working parts. As the corn is shelled it drops through the metal screen directly under the cylinder, and the cobs are discharged at the front of the cylinder.

Mr. Butlin finds that the cost of shelling is considerably less than he pays when he hires it done. The 5 H.P. motor that turns the sheller is not fully loaded, and in shelling 50 bushels it uses only about two kilowatt hours which costs approximately eight cents. The cost of custom shelling is about one cent a bushel.

Another type of sheller that can be found in general use, in small as well as large sizes, is the picker or spring type sheller. The smallest sizes cost only a few dollars and can be operated by hand or with a ¼ horse power motor. They will shell ten to twenty bushels an hour, and are ordinarily referred to as one- or two-hole shellers. A two-hole sheller has approximately double the capacity of the one-hole and takes a ½ horse power motor to operate it.

For the small dairyman or poultry farmer, a small sheller with a grinder that can be driven with a small motor makes a practical outfit. Many farmers have followed the practice of grinding the entire ear. When this is done, either a fairly large electric motor or a tractor is needed. The power cost is greater, and the ground cob adds little or no value to the feed. For these reasons any farmer who has electricity and who grinds

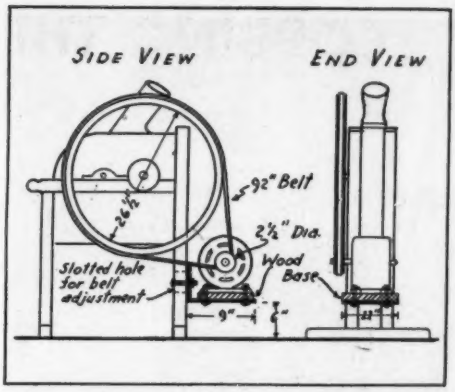


Sectional view of cylinder sheller showing interior construction.

corn should consider the possibilities of the small sheller and small grinder. As far as costs are concerned, the ½ to one horse power electric motor driving a small mill will grind feed as cheaply as the larger mills driven by motors of five to ten horse power.

Where electric power is used in grinding feed. the job can be made almost automatic. The corn may be elevated by a blower from the sheller to bin above the mill. From there it runs down into the grinder and the meal is elevated again to a mixing bin or a bin for storage from which it can be dropped directly into a feed box.

Frequently it will be found that motor driven equipment of smaller sizes will be entirely adequate for farm requirements. This is particularly true if a little attention is given to making a convenient arrangement of the equipment. Such small equipment may be operated by one man; and by using a little ingenuity in setting it up to provide for feeding from overhead bins, the one man may also be doing other chores while he shells or grinds. Such equipment also makes it possible to have fresh ground feed each day.



Mr. James W. Commer, Spencer, Ohio, says this arrangement of a one-quarter HP. motor on a hand sheller has worked for him with complete satisfaction.

REFRIGERATED STORAGE ON THE FARM

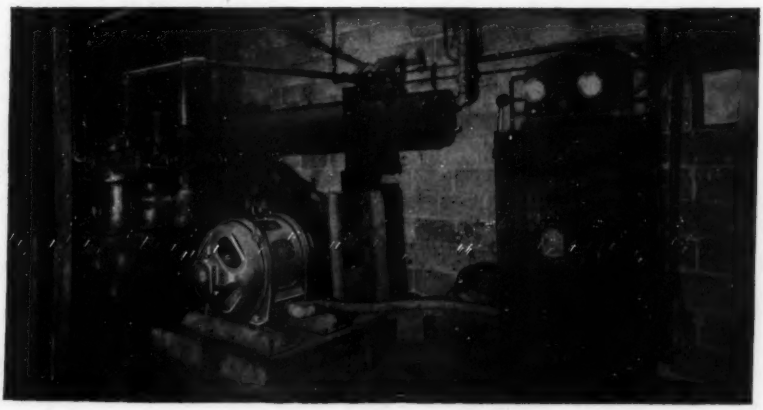
By EARL L. ARNOLD

FARMERS who keep accurate cost accounts estimate that it costs them between ten cents and twenty cents a bushel to store apples for a season in their own storage.

A farmer with his own storage can watch market conditions in several centers and at the appropriate time, sell his fruit in the one which will give him the highest price. Having his fruit readily accessible also permits him to take advantage of local markets and the possibility of selling to truckers.

When commercial storage is used, it is necessary to grade and pack the fruit at picking time. Most farmers who have their own storages, store their fruit "orchard run," thus eliminating the extra labor necessary for grading and packing. After the picking is finished the grading and packing is begun and carried on as the fruit is removed for marketing. The labor is thus distributed over a longer time, and the fruit is placed on the market in a "fresh pack."

Apparently this "fresh pack" plus the better choice of market pays high dividends. A recent survey of farms keeping cost accounts in New York showed that in the year 1935, the farmers operating their own mechanically refrigerated storages cleared above all costs, an average of sixteen cents a bushel more than farms using common storages, commercial refrigerated storages or neighbor's refrigerated storages.



Motor driven compressor unit for a large farm cold storage plant.

Above: Refrigerated storage room showing blower unit on floor and cold air ducts at the ceiling.

Below: A farm cold storage plant for apples in New York State.

The cost of building a farm refrigerated storage can vary greatly. It depends on the type of building, the type of equipment, the source of material and labor, and the size. In general, the cost per bushel of capacity decreases as the size increases. At the present time the cost of building an apple storage with a capacity of 10,000 bushels or over, will probably lie somewhere between fifty cents and one dollar a bushel.

The cost of operation also varies greatly. It depends on the type of power, on the "rate" at which this power is obtained, the construction of the plant, the temperature maintained, and the length of time that the plant is operated. Most storages of this type are operated electrically, and an average of many of these indicates that a consumption of about 1½ K.W.H. per bushel per season can be expected.

Both frame and masonry buildings are used. There is some difference of opinion as to which is more desirable. Cork is by far the most commonly used insulating material.

Two types of systems are in use. In one, commonly called a coil system, the refrigerating coils are distributed along the sides or the ceiling of the room, or both. In the other, a unit cooler or blower system, the cooling coils are contained in cabinets and air is forced over them by powerful fans. "Blowers" eliminate the messiness of the defrosting drip around the outside of the room and over the fruit, and there is some evidence that the rapid air circulation has a tendency to prevent scald of the fruit.

The absence of pipes along the walls and ceiling allows more fruit to be stored in a storage equipped with a "blower." On the other hand, the faster air circulation requires a more careful control of humidity if drying of the fruit is to be avoided.

Within the last three or four years, a few farmers have constructed small plants for the precooling and storing of eggs, vegetables and berries.

There are many problems connected with this. One of the biggest is that different vegetables require storage at different temperatures. Some farmers are overcoming this difficulty by having more than one refrigerated room, and holding each room at a different temperature.

Berry growers place their berries in the refrigerated room overnight, and market them the next day. Some of them report that this overnight cooling allows the berries to be marketed the next morning in such superior condition that they obtain a dollar a crate above the market price.

The size of the refrigerating equipment varies with the size of the storage. The smaller apple storages and most of the vegetable, berry and egg storages are operated by electric motors of ¾ H.P. to 15 H.P.

Electric motors are readily controlled by thermostats, located within the storage room, thus providing completely automatic operation.

WHERE there is one Englishman there is a garden. Where there are two Englishmen there will be a club. But this does not mean any falling off in the number of gardens. There will be three, the club will have one too.

—A. W. SMITH in the Atlantic Monthly.

THE value of a cow is not in the dollars paid for her. It is in the profit she brings in good calves and high yield of milk, and in the pride of ownership. So with electricity; it's the "calves" and "cream" that count.

PIONEERS

ARE you a Pioneer?

Not all pioneers drove covered wagons over the prairies. Some of them drove the first spikes in the railroads, built the first farm power lines, used the first soil heating cable or were first to drive the old bull with an electric prod.

We're out with our floodlight looking for Pioneers—those folks who have been out ahead in the use of electricity on the farm—who have been first to pump water with an electric motor, first to rock the baby with an electric foot on the cradle or first to coax eggs from an unsuspecting hen by turning on artificial daylight. We are looking for Pioneers because they have been using electricity long enough to give us the "low down" on what it's worth.

Whenever an unheralded pioneer is located, we will publish a short story about him. Everyone who knows of a pioneer in the use of electricity on the farm, whether that person be himself or someone else, is invited to send the story to the Editor, ELECTRICITY ON THE FARM, 24 W. 40th Street, New York City. The story should give this information:

1. Name of the suspected pioneer.
2. His address.
3. The use of electricity in which he pioneered.
4. A brief description of the equipment or process.
5. Is it still in use?
6. Improvements or changes which the user has made.
7. A statement by the user or someone who knows or knew him telling of the benefits, savings, or profits, if any, from using it.
8. Any interesting facts which you would like to know about some other pioneer or his use of electricity.
9. Send a good picture of the installation if possible.

It will not be necessary to write a "best seller" story. Just send the facts, the figures and the picture—and don't make it too long.

You will get a check at our regular rates for any information or picture used in ELECTRICITY ON THE FARM.

And if anyone should slip in as a pioneer when someone else was first, please set us right.

"Pioneers" was suggested by Mr. D. E. Blandy, an old timer in rural service work for the New York Power and Light Company at Albany, New York. The first story comes from his territory.

THE EDITOR.

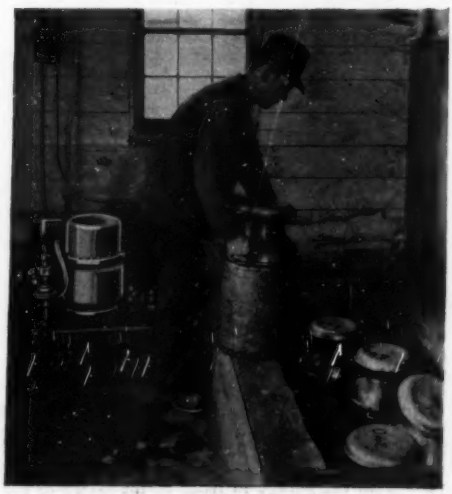
First Farm Milk Cooler

By RUSSELL BAUDER

THE first electrically operated farm milk cooler in the United States was installed on the farm of Charles Stockwell in the Summer of 1925. Mr. Stockwell's farm is located in what is known as the Hallsville section, three miles south of Fort Plain, New York, on N. Y. State Route No. 80.

It happened that Mr. Stockwell received electric service from a rural extension built in 1924 by the Adirondack Power & Light Corporation, which extended its service from the Village of St. Johnsville. Mr. Stockwell's first investment was in a motor to drive his milking machine, which he bought the same year. After the milking was finished, his next problem was cooling the milk and keeping it cold so that it would be acceptable to the milk station where he was then delivering his product. Being a man of progressive nature, Mr. stockwell found by various inquiries that meat markets, stores and soda fountains were using mechanical refrigeration. So he applied to the local light company's office for a similar arrangement to cool his milk.

The problem was referred to its Rural Engineer, a Mr. Lippincott. In the Summer of 1925,



The pioneer of farm milk cooling tanks with its new compressor unit at left.

the first equipment was installed; it consisted of a household refrigeration unit, an ordinary galvanized tank with a box built around the outside and filled with sawdust, and a wood lid on top. The chiller or cooling unit was immersed in the water of the tank along with a home-made pump for circulating the cooled water. After spending about a month on it, Mr. Lippincott decided the machine was too small for the job and also that the galvanized tank with sawdust had insufficient insulating qualities.

The next step was to build a concrete tank with cork insulation to cut down the loss of refrigeration. This was accomplished by building one concrete tank within another with three inches of compressed cork board along the sides, ends and bottom, between the two tanks. A cover was made of matched boards and two inches of cork insulation. A unit, designed to operate an ice cream cabinet, was installed in the tank. The two chillers or cooling coils were put in either end of the tank.

This arrangement worked very satisfactorily for five years, at the end of which time, electrical refrigeration had made such progress and so much more had been found out about electrical milk cooling that Mr. Stockwell purchased new equipment. It was installed in the old concrete tank and has been giving trouble-free service ever since.

Altogether Mr. Stockwell has enjoyed twelve years of having his milk cooled without the burdensome task of ice harvesting and getting ice out of the ice house, especially during his busy Summer season.

Mr. Stockwell's statement: "The labor saved both Winter and Summer is only one of the advantages I have found for an electric milk cooler. The cost of operation is less than three cents per can of milk cooled—which I consider very reasonable. Then, too, I have had no milk rejected because of insufficient cooling. This saving, as well as the peace of mind that my milk is properly refrigerated, is worth a great deal. I am glad I have used a milk cooler these twelve years and knowing what I do now, if I did not have a cooler I most certainly would buy one immediately."

Light Along the Path

By M. M. JOHNS

EVERY farmer has a network of pathways leading from the house to the barn, poultry house, garage, smokehouse and wood shed. These pathways are traveled back and forth each morning and night. Do you stumble over them in the dark in the winter time?

Many farms now have well lighted farm yards and their owners are wondering how they got along without them before.

Down in Lincoln County, Tennessee, Assistant County Agent MacPherson thought a yard light so necessary and important on every farm that he enlisted six farms in conducting yard lighting demonstrations to show the proper types of installation. The interest was so keen as a result of the demonstration that twenty-five other farmers followed the lead. Not to be outdone, the farm women in four communities raised funds and installed lights in the school-house yards.

Farms of different size, location, and layout of buildings call for different types of installations. Mr. Bryant Warden's farm buildings were grouped around a rather small farm yard and comparatively close to the side of the house. He followed the County Agent's recommendation and installed a 14-inch weatherproof shallow-dome reflector, using a 150 watt bulb. The lighting unit was suspended from a bracket mounted on a pole 15 feet high and centrally located in respect to the farm buildings and house. Mr. Warden has found that the light is a big help and saves considerable time in finishing the late evening chores. "When company comes the yard light not only lights the way but radiates a cheerful welcome that was not possible with the old kerosene lantern."

On the Childress Bros. farm, the buildings were more widely separated and somewhat further from the house. It was Mr. Childress' desire to have one yard light so located as to light the path from the garage in front of the house to the barn on one side of the house. An 18 inch weatherproof R.L.M. dome reflector was installed, using a 300 watt bulb. The yard lighting unit was mounted 25 feet from the ground. One control switch was installed at the house and another one at the garage, making it possible to turn the yard light on or off at either place. "Some of our

(*Continued on page* 23)

A yard light directly above the pole. It avoids the casting of a shadow by the pole.

BARNEGAT RANCH

By EARL BURKE

FAMED for the high quality of its Golden Guernsey Milk is Barnegat Ranch, whose spotless white delivery trucks are a familiar sight on the streets in the prosperous cities of Grass Valley and Nevada City, California—important centers of mining activities ever since the Gold Rush days of '49. Behind its well-established reputation for producing high quality milk is the important part played by electricity in making this dairy one of the most modern in the West.

Barnegat Ranch comprises 180 acres, and is located eleven miles southwest of Grass Valley, not far away from the present-day ghost town of Rough and Ready, once a leading hell-roaring mining camp of the early days. Harry B. Cox, the ranch owner, started his dairy project thirteen years ago, specializing from the beginning in pure-bred Guernsey cows. His dairy herd now totals more than 100 registered pure-bred stock. Milk production averages about 140 gallons a day, which is delivered to customers in the two communities served.

In the dairying and farming operations on the ranch practically all equipment that can be so used advantageously is harnessed to electricity. The visitor first becomes aware of the intensive mechanical application as he nears the ranch entrance. Whenever a car passes over a contrivance installed in the driveway, a mechanism is started in operation which opens the gate. As soon as the car has passed through, the contacts close and the gates swing shut automatically.

An ample water supply for irrigating crops, for the barns and dairy buildings and for domestic use comes from an efficient three-pressure pumping system, utilizing electric pumps. In the dairy barn electric machines save time by milking cows in a smooth-running routine planned to meet daily delivery schedules. As the ranch speciality is pure raw milk of superior flavor, the dairy equipment is electrified to the Nth degree to assure purity and high quality. Included are an ice maker, sterilizer, milk cooler, bottling machine, cream separator, bottle washer and a commodious walk-in refrigerator. Motors drive the feed cutters and mixers, run the general farming machinery as well as the repair shop used to keep equipment in working order. During the short daylight months of the year large floodlights illuminate the barnyard to facilitate early morning and evening chores.

In the three homes occupied by Mr. Cox and his chief aides, electricity makes it possible to bring them every city home convenience. These include modern electric kitchens equipped with electric ranges, refrigerators—electric shavers and suitably arranged lights for shaving in bathrooms—electric fans, toasters and other home appliances that make for comfort in living.

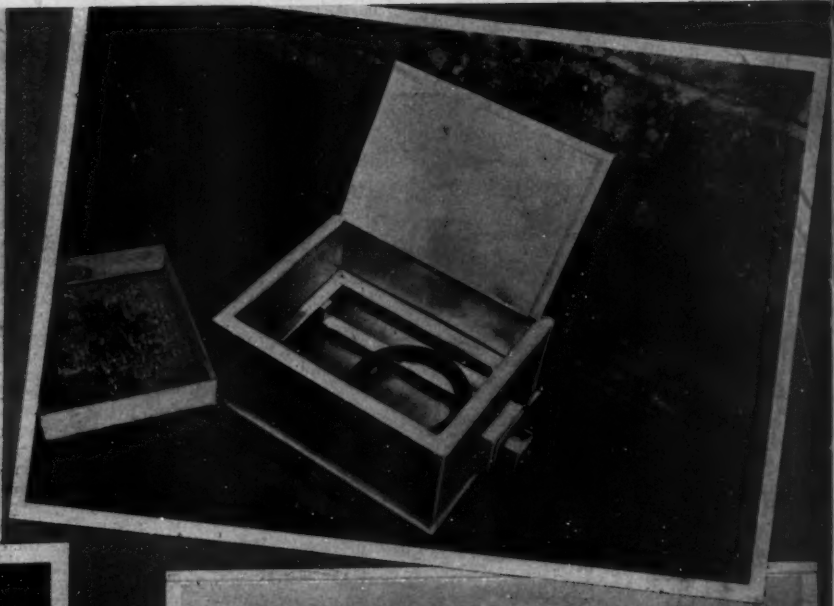
The ranch has its own telephone system—another labor and time saver—which connects the ranch office in the home of Mr. Cox with the dairy and other points of operation.

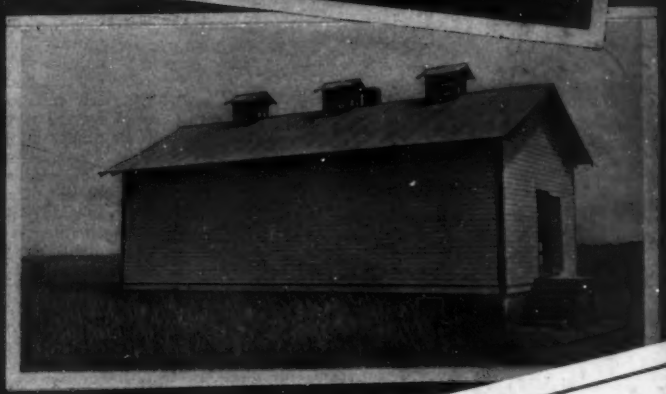
For some years Mr. Cox operated his own electric plant, producing current and power with three 1,500-watt generators driven by gasoline engines. While this installation gave what was considered fairly good service, it was not entirely satisfactory to the ranch management because it lacked the needed capacity to operate the various pieces of equipment on an efficient basis. The output was so inadequate that only two or three farming or dairying machines could be operated at the same time. Generally when someone wanted to start one operation, like using the feed cutter, some other equipment then in use had to be shut off. This necessitated the different mechanical tasks being staggered over many hours and naturally made long work days. In addition, a skilled mechanic was always required to service the generating plant and keep things in proper running order.

Several months ago when the local power company extended its lines into that territory, Mr.

(*Continued on page 27*)

Pure-bred Guernseys born last fall on the Barnegat Ranch of Harry B. Cox. Second and third from right show registration tag on ear.





Photographic Records of Interest to the Modern Farmer

Top Row (left to right): An electrically equipped greenhouse for propagating plants and growing winter flowers. Heated from the house heating system.

Inside of Joe Webb's home greenhouse on his farm near Westchester, Pa. Over the bench may be seen three lamps for stimulating plant growth and an electric insect killer.

An experimental soil sterilizer. The metal tray is filled with soil and placed in the insulated box over the circular heating element. The time for heating is controlled by an inexpensive time switch on the end of the box. On farm of Joe Webb.

Center Row (left to right): Water pan equipped with a thermostatically controlled electric warmer. The lamp bulb in the back of the pan is used as a float to regulate the flow of water.

Clean milk and clean hands go together in this New York dairy barn. Hot water without fire hazard from the tank at the rear with sink and paper towels handy for milkers.

This Virginia sweet potato storage house is equipped with electric heaters and lights. Temperature is automatically held at 85 degrees for the curing period and dropped down to 55 or 60 for storage.

Lower Row (left to right): Straight furrows made by proud plowers at the International Plowing Match, Fergus, Ontario, 1937.

Forrest Banning of the Florida Light and Power Company inspects the float control which starts and stops the electric pump and holds water in this Everglades irrigation canal at a constant level. The automatic float constitutes a faithful watchman who serves 24 hours a day with little or no supervision.

These automatic drinking cups induce cows to drink more water resulting in 10 per cent more milk which has more than paid for the electric pump system for this purpose.

I CURE A DAIRY FARM

By ABRAHAM REINSTEIN
Willimantic, Conn.

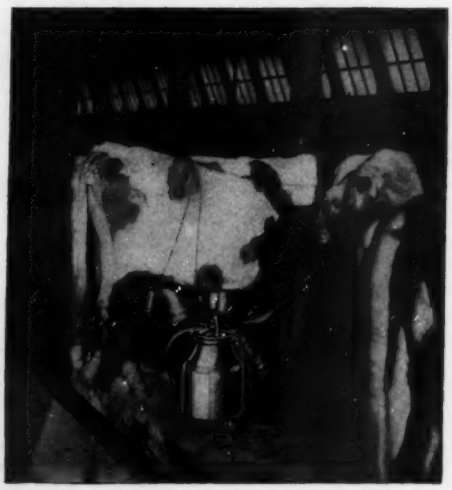
ABOUT a year ago I became very ill and was unable to work on my dairy farm. My son couldn't do all the work himself so we had to hire help. Along about spring, my health became much better, but I was not permitted to do any labor or work of any kind around the dairy houses. With the market prices of my dairy products at almost a profitless level and feed prices rising, I could hardly afford to hire help and expect to make a living.

In the Spring the power company ran a line through Chestnut Hill Road and we decided to electrify some operations in our dairy barn and milk house. First, I bought a two unit milking machine operated by a ¾ h.p. electric motor. My son now milks our 26 cows by himself, morning and night. Before we got the electric milkers, three men were required to do this same job, so we now save $10 a week for milking labor alone. By putting electric bulbs in the dairy barn we were able to see better, work faster and felt safer about our method of lighting. Then we bought an electric milk cooler and a refrigerator, both operated by a 1 h.p. motor. The saving of labor and cost of operating this equipment was remarkable. The ice water method of cooling and refrigerating was slow and cost us $5 to $6 a week alone for ice, besides the time and labor spent hauling and breaking it. With this new equipment we cool 125 quarts in 15 minutes' time, twice a day for about 16c per day with no ice to buy or handle, and besides, my refrigerator temperatures are definitely low enough to keep our milk safely. That alone is another big saving in my overhead. We put a ¼ h.p. motor on our cream separator and no man can do as good a job by hand as that motor. Besides, while the motor is driving the cream separator, we can be doing other things, and that's very helpful to us.

I learned that if we give our cows plenty of water to drink while they are in the barn they

Left: Electric milkers which help Mr. Reinstein milk 26 cows twice a day, thereby saving him $10 a week for hired help he required for the same chore performed formerly by hand.

Right: The electric milk cooler and refrigerator cools milk quickly and refrigerates safely for 16 cents a day for electricity; saving $5 to $6 a week for ice alone formerly used in the ice bath cooler.



produce at least 10% more milk, so we installed automatic drinking cups at the milking stalls and pump our water from a 98 foot well just outside of the barn with a ¾ h.p. electric motor. This installation which provides water for the cows and cleaning purposes in the barn only, has paid for itself with the increased milk production.

In the house we enjoy the labor saving conveniences of the electric range, water heater, refrigerator and ¼ h.p. motor which provides water for the household and the milk house. Although I'm still unable to do work about the dairy farm, my son and I carry on better and more profitably than ever before. Electricity does most of the hard work now and it costs me about 41c a day for everything, where before it cost me about $3 a day for ice and hired help alone. I cannot afford to be without it and make a living.

Blossoms on Schedule

ELECTRIC soil heating, adaptable to many uses in the realm of plant culture, is applied in an interesting manner at the Wepper Nursery, Inglewood, Calif. This nursery is famous throughout Southern California for its fine begonias, over 800 different varieties of which are produced under the direction of Mrs. Eleanor Wepper, proprietor of the nursery. Mrs. Wepper started with Rex begonias, and by cross-pollenization has evolved many entirely new varieties, inciuding the "Franklin Delano Roosevelt."

Construction of Propagating Bed

Begonia plants are propagated electrically in a small room adjacent to the main division of the greenhouse. The propagation bed is 26 feet long and 3 feet 9 inches wide. A layer of soil placed on the bottom of the bed forms the foundation for 160 feet of electric heating cable. More soil is then laid and topped with a wire screen, which permits the changing of the upper soil without disturbing the cable. Plants are set in the top layer of soil placed above the screen. Operation of the bed is automatic, the temperature being regulated by a thermostat. The installation was made in co-operation with engineers of the Southern California Edison Company rural electrification service.

A valuable saving in time required for propagation is one of the advantages Mrs. Wepper receives from her electrically heated bed. Tuberous begonias mature two months ahead of their natural time. Seed begonias require only six days with soil heating as compared to the seventeen days which is their normal propagation period.

Further, the plants can be counted on to develop within a certain time, since their growth is independent of weather conditions. Special orders and seasonal markets can be met with unfailing accurracy.

Control of damping off is another desirable feature of this electrically heated bed. After the bed is soaked with water at the time the plants are set, no more moisture is added during the propagation process, and possible damage by damping off is avoided.

Some interesting results likewise have been attained at the Wepper Nursery with the use of electric heat to propagate St. Paulies violets. These violets, which originally came from South America, require all winter to mature in California under ordinary conditions. With electric heat, they are propagated in 20 days.

Mrs. Wepper is a confirmed enthusiast over soil heating.

"It's a money producer," she says.

Beautiful begonias produced with electric heat.

•

Mrs. Eleanor Wepper and her electrically heated propagating bed.

HOW TO FIT A BUZZ SAW

By L. M. ROEHL

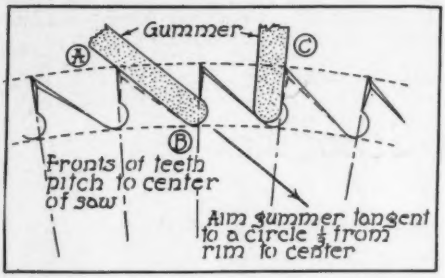


Fig. 1. Shape of cordwood saw teeth and position of gumming wheels.

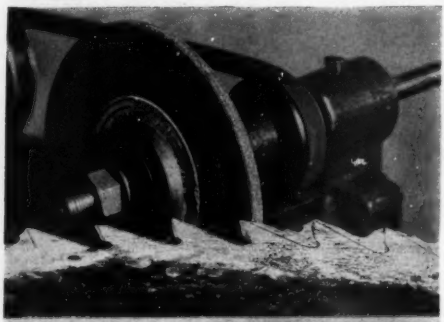


Fig. 2. (Upper) Gumming a buzz saw.
Fig. 3. (Lower) Filing a buzz saw.

THE following directions are for a cordwood saw such as farmers use for cutting up stovewood. The shape of the teeth of such a saw is shown in Fig. 1. It will be noted that the front edges of the teeth pitch to the center of the saw. If the teeth are made V pitch as is done with small cut-off saws the saw operator would need to crowd the wood against the saw to make it cut, and if the fronts of the teeth pitched back of the center there would be a tendency for the saw to draw the wood toward it while sawing, tending to slow up the speed of the saw and perhaps stall the engine.

There are four steps to the fitting of the saw: 1, true it up or joint it; 2, gum it; 3, file it; 4, set it. In saw fitting shops jigs are used for truing it that few farmers possess. They may be trued up while on the shaft by holding a piece of an old grindstone against the teeth while the saw is slowly rotated backward by hand. The stone needs to be held on the saw frame so that it remains at a fixed distance from the center of the saw, thus grinding off the tips of teeth that project farther from the center than the rest. This is continued until all points are equidistant from center. In this connection, saw owners and users are frequently surprised. All points are sharp but truing it reveals that some points are an eighth inch or more from the center than others.

Study Shape of Saw Teeth

To gum a saw, a high speed power grinder is required. The same gummers are used as for the crosscut saws. It is very helpful to those who do not fit saws extensively to make a study of the teeth as in Fig. 1 so as to have clearly in mind what shape to make by the gumming and filing. It is helpful to draw a line or circle, B, at whatever depth to gum the saw at hand, and also to chalk the surface and mark out the teeth as shown in Fig. 2. To gum out the metal between two points the gummer is aimed in two positions; first, from the point directly toward the center of the saw as indicated by lines at C down to the depth of the tooth. The position of the saw is then shifted as at A, so that the gummer is aimed tangent to a circle one third way from the teeth to the center. The back of the tooth is thus shaped as shown at A. While in this position the tooth is slightly undercut as indicated. In this operation the workman needs to exercise care and not go below the line for depth of teeth.

Both fronts and backs of teeth are filed to an angle of about seventy degrees. Use of the T bevel is helpful in this connection. It is set by placing the blade of the bevel at 1¾" on the blade and at 6" on the tongue of the steel square.

The fronts of the teeth are filed first, filing only enough to give the front of the tooth the correct pitch and bevel. The tooth is filed to a point by filing at the back of the tooth. Every other tooth is filed from one side and the others in like manner from the opposite side. A 12" mill file is well suited for the work. The position of file and hands is shown in Fig. 3.

A satisfactory method of setting a buzz saw that is available to all farmers is the use of a piece of

railroad rail. A piece thirty or thirty-six inches long makes a very useful farm anvil and may be used for the saw set. A bevel is filled at one end as shown in Fig. 4. The back line of the bevel is about 3/16" from the edge of the rail at one side and 3/8" at the other. The file is held so as to make a clearance of about 1/32" at the 3/16" edge and 1/16" at the 3/8" edge. Thus the workman may select a place on the beveled surface to suit the particular set required by the work at hand.

The saw is then placed on the set or rail as

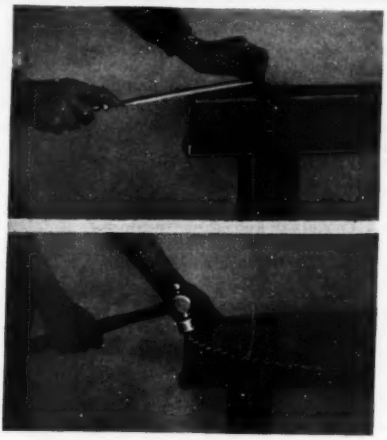


Fig. 4. (Upper) Filing a bevel on a railroad rail for a saw set.

Fig. 5. (Lower) Setting a buzz saw.

shown in Fig. 5 and every other tooth set with a firm blow of a machinist hammer. The saw is then turned over and the other teeth set in like manner. In the setting operation it is desirable to mark the place on the set with chalk or pencil where the tooth is to be placed and observe closely that each tooth is placed at the edge thus assuring that all teeth are set alike.

Light Along the Path

(*Continued from page* 16)

chickens were stolen year before last and also a little corn, but since we have had a yard light, no one seems to prowl around our place. Sometimes we leave the light on all night to let everyone know we have it," said Mr. Childress last June after using the yard light six months.

Good yard lighting has revived the interest in outdoor games. Croquet, horse-shoe pitching, and tennis are a few of the games farm people are able to enjoy after dark.

If your farm yards are not well lighted you are missing one of the greatest low cost services electricity can render.

Epitaph

With Violet cuddling in his arms,
He drove his Ford—poor silly.
Where once he held his Violet,
There now is clasped a lily.

—*Yellow Jacket.*

They're all agreed on the MYERS

RUNNING WATER — YOUR FAMILY DESERVES IT

YOU can find many farm families right in your own county who have long enjoyed the use of a MYERS Water System. Ask the members of such a family what they think of the MYERS and you will invariably find them agreed that they could not have made a wiser purchase.

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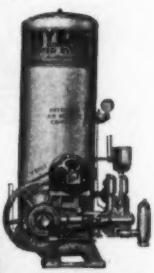

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Address .....

ELECTRICAL HOUSEKEEPING

Conducted by GAIL MEREDITH

Candy for Christmas

LAST year I went to a big Christmas party for children. There was a luncheon and afterwards a magician to work magic. The chairman of the party happened to be a doctor. When he got up to introduce the magician, he said,"

"Now children, you've had your luncheon and you're going to see a wonderful show. We didn't get you any candy because we didn't think it would be good for you."

He got no farther. A perfect chorus of boo's drowned him out. They didn't come from the children sitting on the edges of their chairs in the front row. Not a bit of it. The precious lambs were too polite for that.

Those boos came from the fathers and the mothers and the uncles and the aunts in the back of the room. And if I know my boos, they just meant the children would be having candy whether Dr. Van Riper thought it was a good thing or not.

That being the case folks who spend a lot of time thinking about the foods we are eating, or should be eating, have worked out some recipes for sweets they say are pleasing to the palate and a wholesome part of the diet.

These were devised by members of the Home

"Nothing is as good as it looks."
"No," said Pierrot. "It's better."

Economics Department at Cornell University and published in a circular called

WHOLESOME SWEETS FOR CHILDREN

"Sweets for children should be judged," they say:

"First. Upon the basis of what else beside sugar they contain. The best sweets for children are those that contain a minimum of sugar and a maximum of building and regulating foods. Such sweets would be oranges, apples, dates, raisins, figs.

"Second. Are they free from substances which, because of their overstimulating qualities, are best not given to children? Such substances might include chocolate and it is because chocolate, like tea and coffee, is stimulating, that even milk chocolate is not advisable for children.

"Third. Do they tend to retard or increase the appetite? Apples, oranges, and grapefruit (especially the juices of these) increase the appetite, and therefore are very good for children. Chocolates and some other rich candies tend to retard the passage of food from the stomach and so the child is not hungry for a meal after eating them.

"Fourth. Are they given at the right time, that is, as a dessert after the meal is over?"

Parisian Sweets

Use equal parts of figs, dates, and raisins. Wash, stone the dates, and put the figs, dates and raisins through a food chopper. Mix well, shape in small pieces, and roll in powdered sugar. Or make a roll about the diameter of a quarter, cut in slices and roll in powdered sugar.

Stuffed Dates

Wash, dry, and stone dates. Cut strips of marshmallow with scissors dipped in cold water. Stuff dates with marshmallow strips and roll in granulated sugar.

Stuffed Prunes

Wash and soak prunes overnight. Dry and remove stones by cutting the prune lengthwise. Stuff with marshmallow and roll in granulated sugar as directed for stuffed dates.

Turkish Raspberry Paste

1 cup raspberry juice — 2 cups sugar
3 tbsp. granulated gelatin
Powdered sugar

Pour ½ cup raspberry juice over three tablespoons of granulated gelatin and let stand until gelatin has absorbed the liquid. Add ½ cup juice to the sugar and heat to the boiling point. Add the softened gelatin and boil twenty minutes. After boiling begins add two tablespoons of lemon juice, and, if desired, a little rose fruit-coloring paste. Turn into a straight sided pan that has been rinsed out in cold water.

When cold, turn on to paper on which powdered sugar has been sifted. Cut into squares and roll each square in sugar.

Molasses Candy

2 cups molasses — 3 tablespoons butter
2/3 cup sugar — 1 tablespoon vinegar

A heavy kettle is best; iron or granite being preferable. Put the butter in the kettle, melt it and add molasses and sugar. Stir until the sugar is dissolved, after which stirring is not

necessary until the candy is nearly cooked, when it should again be stirred constantly. Boil until the mixture becomes brittle when tried in cold water. Add vinegar just before taking from the fire. When cool enough to handle, pull until porous and light colored, allowing the candy to come in contact with tips of fingers, not being squeezed in the hands. Cut in small pieces and let stand on slightly buttered plates to cool.

"This last," say the home economists, with what seems to me unnecessary caution, "Should be used sparingly for little children."

But watch the 'teen age scramble for it!

The doorknobs will be sticky for a week; you'll be getting gobs of it on the sole of your shoe, and every dish in the house will seem to be covered with uneven hunks of pale yellow candy, but, oh, everyone *will* have a good time if you let them pull candy.

• • •

(*Electrical Housekeeping Section continued on page 26*)

December Contest

When you read Mrs. Baker's Christmas tree, I am sure you'll agree that she wants lovely, substantial gifts for Christmas. But when a woman gets to wishing, her terminal facilities are not of the best, any husband will tell you that—and the women who entered our last contest did such a good job of wishing that I have told you about it in one of our stories this month. For our next contest I do wish you'd send me your best cookie recipe. Rolled cookies, drop cookies, refrigerator cookies, any kind will do. Only I warn you they'd better be good, for your neighbors who are sending me recipes are mighty fine cooks. And if it should chance that anyone has a recipe for fat round sour cream cookies and could teach me—and you—to make them as my mother-in-law used to make them, that I'd consider being a benefactor to the whole human race.

Five dollars to you if yours is the recipe we choose. And payment at our regular space rates if we use it at any time in the magazine.

So all the letters become the property of the magazine, and in sending them to us, you agree to their use.

Address your letters to me, Gail Meredith, 1026 Seminole Highway, Madison, Wisconsin.

For FALL and WINTER

More and more, Century portable motors are finding a necessary place on the farm doing all kinds of year-'round chores.

In the fall and winter particularly—during the Grinding, Baling and Wood Sawing season—they are especially valuable. . . . At all times they do more work in less time and add comfort and leisure to enjoy the better things in life.

Built in 3 and 5 horsepower sizes — for Single and 3 Phase current. . . . Write for information.

CENTURY ELECTRIC COMPANY

1806 Pine Street St. Louis, Mo.

Offices and Stock Points in Principal Cities

Century

MOTORS UP TO 600 H. P.

Watch the Wires

WHEN we reluctantly took those twisted little wax candles from our Christmas trees, unsnapped the last flimsy tin holder and began stretching a cord of gay little electric lights about the branches instead, we said to ourselves:

"Well, I hate to have the candles go; the candle light is so pretty. But these lights are bright and colorful, and more than all else they are safe. We won't have to hold our breath from the time the candles are lighted till the last little nubbin drops its last blob of hot wax on Junior's hand, and the last little flame dies down just short of catching a link in the daisy chain above it."

Christmas tree lighting sets are safe if they are well made. There is just one thing to look out for in buying them. Those sets in which the molded insulating material of the lamp sockets does not extend far enough beyond the end of the metal screw socket leave those screw sockets or the metal bases of the lamps exposed.

If you have trimmed you tree with metallic tinsel icicles or gay metal balls these may possibly swing across two of these exposed metal parts at the same time, and, touching a live part of the socket, cause a short circuit.

Before you buy a string of lights for your tree, screw a bulb into the socket and make sure that a waving strand of tinsel could not touch the metal part of either the socket or the lamp.

If there are metal reflectors behind the bulbs, see that they are well insulated from the metal socket and the base of the lamp.

When you buy a string of lamps that bears a label giveing the approval of the Fire Underwriters, you will know they are safe. The workers in the Underwriter's laboratory have tested them for you.

The electrical inspector in one of the midwestern cities urged this upon the people of his town last year.

"To prevent short circuits which may cause trees and decorations to ignite only approved equipment should be purchased. Old decorations saved from last year should be checked to determine if the insulation is intact. Exposed live wires will cause short circuits and possible fires."

Electrical trains, tiny stoves, little irons, and any toy that runs by electricity are perfectly safe for your children if they are well made, and if they are kept in good condition. Watch them yourself. Your child won't know there is anything wrong with them until they stop running altogether.

It is wise, electricians tell us, to teach a child to disconnect all electrical toys at the socket when he is through playing with them. Then, even if the switch built into the toy is not entirely dependable, they will surely be turned off.

The ounce of prevention that prevents those pounds of danger is so very simple when you are dealing with things electrical. It is worth while to make sure you've taken care of it.

What I'd Like to Have for Christmas

(Prize Winning Letter for September)

☆

My
Dear
Santa:
Do you
k n o w
that moth-
ers look for-
ward to your
coming, too?
Only we call you
Love or the Spirit
of Christmas. You
know, Santa, we are
only grown-up chil-
dren who need so many,
many things that you can
give us. First of all, send
me Patience, enough to last
through all the trials that
daily appear; then give me
Understanding, that I may be,
from day to day, a better mother,
a better friend, a better neighbor.
And Charity that I may see the good
in all and not the small, unimportant
faults that I so easily find. Give me a
Joyous Spirit, that I may spread cheer
and sunshine along the way and that those
whom I meet may know that I have walked
and talked with the Master. And give me
Hope, the greatest of all gifts, brought to the
world by the
birth of the
Christ child.
And last of all, but not least, I want a Star,
a bright guiding Star, to teach me how to use
the electric gifts you bring. And may the holi-
day season be a happy and blessed electrified
one for all the world, dear Spirit of Christmas.

MRS. J. LITTLETON BAKER,
Route 2,
Midlothian, Texas.

AND numerous indeed are the hearts to which Christmas brings a brief season of happiness and enjoyment. How many families whose members have been dispersed and scattered far and wide, in the restless struggle of life, are then reunited, and meet once again in that happy state of companionship and mutual good-will, which is a source of such pure and unalloyed delight, and one so incompatible with the cares and sorrows of the world, that the religious belief of the most civilized nations, and the rude traditions of the roughest savages, alike number it among the first days of a future state of existence, provided for the blest and happy! How many old recollections, and how many dormant sympathies, Christmas-time awakens!—CHARLES DICKENS.

RAIN and RUST

By D. T. Boyd

THE annual rust bill of the United States is estimated at $500,000,000. This colossal sum is the cost of deterioration and depreciation, exclusive of wear of equipment engaged in useful work. Normal wear and tear is to be expected, but the rust bill is a dead loss.

The weather, so beneficial to crops, takes its toll of farm equipment. The damage to electrical equipment, motors, switches, fuses, etc., from being exposed to rain and snow may render them unfit for further service. Pure water is a non-conductor of electricity; but water is such an excellent solvent that chemicals from dust or air enter into solution with it at every contact. Because of this, electrical equipment may be short circuited when wet and should not be operated until tried out.

Portable farm motors and starting equipment should be kept dry. That will save rust, and also save undue deterioration of insulation. Stationary switches should be installed where protected from the weather.

Pump motors which are frequently exposed to wide changes in temperature and humidity, but which should be always on the job, should be protected from rain, snow and ice by suitable buildings or sheds.

Barnegat Ranch

(*Continued from page* 17)

Cox signed up immediately for service and abandoned operating his generating plant. Operations now are carried on more smoothly and efficiently to save time, and the special mechanic is no longer needed. Mr. Cox has since expressed himself as being very well pleased with the electric service and "pleasantly surprised by the very low bills" as compared with former operating and maintenance costs.

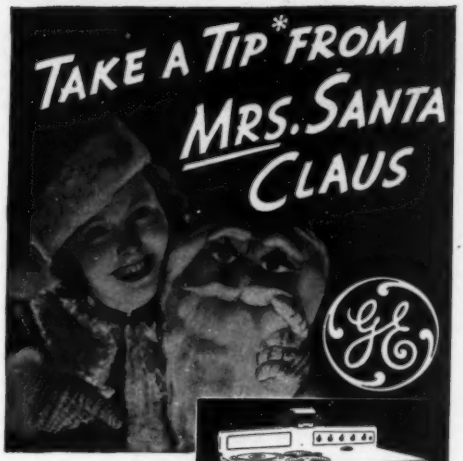
Mr. Cox believes in using the most modern methods throughout his dairying operations. Occasional inspection trips keep him abreast with the progress being made in the newest phases of scientific dairying and enable him to carry out his ambition of having one of the most modern electrically-equipped dairy ranches in the country.

As It Should Be*

"THE farmer today rates with others, and what is more important with himself, as a man able to take care of himself in other fields of activity beside agriculture. As a result his whole family has shaken off its feeling of inferiority and his boys and girls stand up in high school and college and make no apologies because they come from a farm and intend to return there.

"I have seen my farmer son fork manure all day and dress up in a white tie and tails at night. This is as it should be. If he and other young men like him can do this and be accepted in 'white tie and tails' society after working hard with the hands on a farm all day, they are going to look at farming differently."

*H. E. Babcock, Pres., Grange League Federation, New York, in an address before the American Society of Agricultural Engineers, Oct. 1937.



*Make mother Merry this Xmas with a G-E Range

CHRISTMAS SPECIAL

THE APOLLO—*Sturdy new G-E Range with bolster base. All thrifty conveniences: condiment set, recipe box, adjustable sliding shelves in oven, Calrod units, at a popular price.*

SANTA'S wife is the real authority on gifts for women. This Christmas she says, "Give mother a present she'll enjoy three times a day, every day for many years to come—a General Electric Range!"

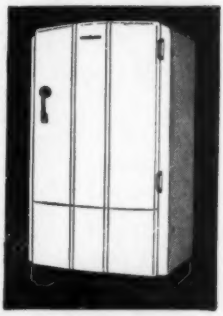
Hi-Speed Calrod Cooking Units

General Electric Ranges are equipped with the famous Hi-Speed Calrod units developed by the G-E "House of Magic." They give swift, clean heat, use less current, last longer. You can buy a G-E Range on convenient terms if you wish.

General Electric TRIPLE-THRIFT Refrigerator

You save 3 ways—on price, on operating cost, on upkeep!

Famous G-E sealed-in-steel Thrift Unit with *Oil Cooling* assures more cold for less current, quieter operation, *enduring* economy. 5 Years Performance Protection.



General Electric Company, Appliance Division, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC

ON THE AIR

Conducted by JEROME J. HENRY

Waltzes Americans Like to Hear

ABE LYMAN, popular radio conductor, who for the past five years has been compiling requests from listeners in order to determine the nation's most popular waltzes, has at last completed his tabulations.

Most requests were for "Dear Old Girl," followed in order by "Missouri Waltz," "Down by the Old Mill Stream," "Beautiful Ohio," "Drifting Back to Dreamland," "Kiss Me Again," "Always," "Three O'Clock in the Morning," "I Love You," "Sweet and Low," "Juanita," "Remember," "I'm Forever Blowing Bubbles," "Isle of Golden Dreams," and "Girl of My Dreams."

Most popular of the semi-classics are "Liebestraume," "Drigo's Serenade," "Caprice Viennoise," and "Estrellita."

• • •

Not So Funny

KALTENMEYER KINDERGARTEN broadcasts are bedlams of hilarity but Kaltenmeyer Kindergarten rehearsals are fights and arguments from start to finish over what's funny and what isn't funny.

What's more Bruce Kamman, creator of the show, who plays the role of Professor Kaltenmeyer, usually promotes the fights himself and points to them as one reason the kids—ranging in ages from 25 to 40—have been putting on successful and sprightly comedy broadcasts since 1932.

Scripts for the kindergarten are written a week in advance by somber hard-working Harry Lawrence. The battle between Lawrence and Kamman usually gets underway each Monday and rages until the show goes on the air the following Saturday.

Lawrence has to defend nearly every joke. When the script is taken into rehearsals Johnny Wolf (Izzy Finkelstein), Merrill Fugit (Percy Van Schuyler), Billy White (Cornelius Callahan), and Cecil Roy (Daisy Dean) pounce on it with pencils like lions pounce on raw meat. The kids take their coats off, have been known to hurn uncomplimentary remarks at each other over difference of opinion, and sometimes the average 14 hour rehearsals stretch to 20.

When Lawrence's script hits the air it still isn't sacred. There was the time Wolf thought the show was dragging, so he decided to ad lib. As Kamman started one of his famous roll calls, Wolf noticed the set of whiskers being worn by the Professor, who like the cast dresses his part for each broadcast, was falling off.

"Oy Oy, Professor, you is shedding," Wolf broke in.

The rest of the kids picked up the cue and in the deluge of spontaneous wisecracks Kamman was hardly able to read his lines.

• • •

Ghostly Sound Effects Test Ingenuity

HOW would you make a noise like a ghost? Or the sound of an apparition in a dream? Or simulate the utterances of voices of the dead?

NBC sound effects engineers are a pretty ingenious bunch. They've produced every mundane noise from the sizzle of a frying egg to the crash of a thunderstorm. But not until the streamlined Shakespeare series were they called upon to venture into the realm of the supernatural.

And since John Barrymore took the air in "Hamlet" they've made many a ghost walk. Some illusory spectral sounds came as the result of hours of ingenious experimenting and some were hit upon by chance.

In "Hamlet," a saw moaned for the ghost of King Hamlet.

In "Richard III," muted violins and a cymbal played an eerie tremolo for another ghost scene as the King's victim came back in a dream to accuse him.

Also in "Richard III," the ghostly effect of the voices of the dead was obtained by having actors speak their lines into a box-like contraption over the end of which was stretched a tightly drawn skin.

The Hamlet ghost was slow to materialize. Producer John Swallow spent days worrying about the background sound for the scene.

Swallow was about to admit failure when into the studios walked a saw player for an audition. Swallow heard the wail of the saw and hired the owner—not as an artist, but as a ghost.

When "Richard III" was being rehearsed, Producer Marvin Young had almost despaired of working out the musical background for the "dream scene," until he heard a violinist in Will Prior's orchestra toying around with a slinky cadenza on a muted violin. "That's just the effect I want," shouted Young—and that was the effect the listeners heard, except that all the fiddles were muted and the cymbal was added.

All the mortal duels in which the Shakespearean characters figure on the air are fought, not by the actors, but by sound technicians, with real swords.

To simulate the sound of falling bodies, the sound effects men simply fall to the studio floor. They haven't been able to substitute a trick more natural than a real fall.

In "Richard III," Barrymore almost forgot to

Nelson Eddy, Charlie McCarthy, and Edgar Bergen, the popular Sunday evening entertainers over a national network.

die. Stabbed (in the script) by Richmond, he walked away from the mike and Young frantically urged him to return.

"But I'm dead," Barrymore remonstrated in a whisper.

He was rushed back on the air, however, to utter the horrible guttural sounds of dying Richard just in the nick of time.

• • •

Her Leading Men Land in Movies

BEING a leading man for Anne Seymour, leading lady of The Story of Mary Marlin, seems to be a certain formula for landing in the movies. Eight Hollywood greats, including Don Ameche and Tyrone Power, once played opposite Miss Seymour in either radio or stage productions.

Warren Williams, who played with a stock company in upstate New York with Miss Seymour in 1929, was the first to reach Hollywood heights. C. P. Huntley, Jr., now with Universal Pictures, also played a lead role with Anne during the 1930 summer season.

B. A. Rolfe, who directs the orchestra with Robert L. Ripley's "Believe-It-Or-Not" broadcasts.

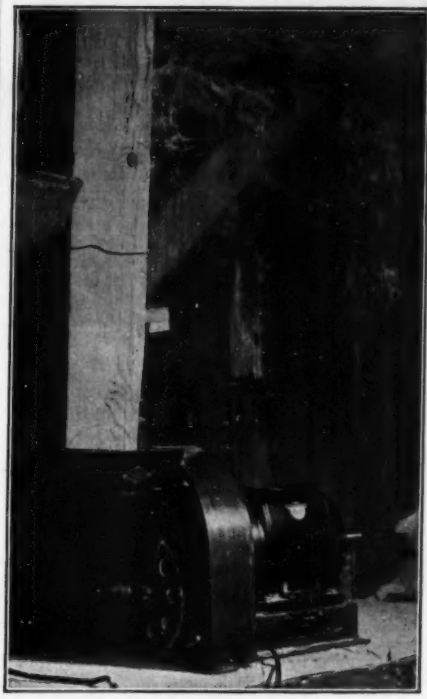
John Eldridge now with Warner Brothers, played eastern stock with the NBC star in 1931, and Walter Abel topped a stage bill with Anne in New York all that winter. Arthur Jacobson, the Henry Hunter of the movies, played opposite Miss Seymour in the drama, Grand Hotel, and was her first leading man in that radio production. Don Briggs, now with Paramount, was another leading man in Grand Hotel who played opposite Anne. Tyrone Power played in the same series in 1934 and 1935 before going to Hollywood, as did Don Ameche.

Anne's present leading man is Don Griffin, who plays the role of Joe Marlin in a down to earth story of all the troubles, joys, and experiences in the lives of a young married couple.

• • •

Scores a Triple Success

Most ambitious young girls aspiring to stardom would be satisfied with making good in one field of



Farmer Says His Viking Mill Saves Both Time and Money

John R. Liedel, 11141 Gramlich Road, Maybee, Michigan, has this to say about his Viking Hammer Mill:

"Last spring I bought a small electric feed grinder (VIKING) and I find that it saves both time and money. For $4.50 to $5.00 a month I can grind feed for 17 head of cattle, 500 to 600 chickens and a few hogs. My entire electric light bill for lights, pumping water, ironing and washing is less than my former bill for grinding feed alone, and I can have any mixture of feed at anytime."

"What I like best about the Viking Hammer Mill", says A. W. La Bo, Monroe County, Michigan, "is its convenience. I can grind any mixture of feed I want and have it fresh. This mill is large enough for any farm. It is 100% in every way and it's easily the most economical way to grind feed. I wouldn't be without one."

Unsolicited testimonials like the two above and pictures of home made installations like the one above are received in nearly every mail.

Grind your own feed at low cost, when you want it, as you want it. Powered with a one-half horse power motor the Viking Hammer Mill grinds up to 700 pounds of feed per hour with less than one kilowatt hour per hour.

Write for literature and complete information

VIKING MANUFACTURING CO.
Jackson, Michigan

MILK and SEPARATE THE DE LAVAL WAY

NO EQUIPMENT a dairy farmer can own will give greater profit and satisfaction than De Laval Separators and Milkers.

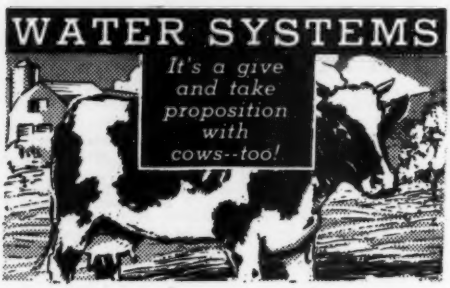
There are now thousands of De Laval Milkers in use throughout the world, milking millions of cows with splendid results. The De Laval Milker will do your milking in at least half the time, and do it better than it can be done by any other method.

When it comes to separating, there is nothing that can compare with a De Laval. It skims cleaner, runs easier and lasts longer. Sizes for every need and purse.

See your De Laval Dealer or write nearest office below

THE DE LAVAL SEPARATOR CO.

New York 165 Broadway — Chicago 427 Randolph St. — San Francisco 61 Beale St.



You have a big investment in your cows . . . and you know the value of water to make them pay you a profit in increased milk . . . Your dependable Uniflow Water System will push plenty of water to your cow stables for cleaning at far lower cost than city folks pay for sprinkling . . . tell us your needs . . . we'll do the rest!

Some good territories open for live wire salesmen

WATER SYSTEMS RUNNING WATER WATER SOFTENERS

ELECTRIC REFRIGERATORS

UNIFLOW MFG. CO. 1503 EAST LAKE ROAD ERIE PENNSYLVANIA

MILK COOLERS

amusement. But not blonde Florence George. The petite coloratura soprano from Dayton, Ohio, has scored a triple success, and all in less than one year.

Radio, the operatic stage, and the screen have recognized and rewarded the talents of this young miss, who has just turned 21. To top her other honors she was selected last fall as the feminine soloist on the new Packard Hour series starring Lanny Ross and Charles Butterworth, with Raymond Paige's orchestra.

After making her microphone debut with Chicago radio studios, Miss George was signed by the Chicago opera. Last summer she visited Hollywood and within one week affixed her signature to contracts with Paramount Pictures for screen musicals.

• • •

A Mackenzie Leads Hawaiian Clan

MIX the canniness of the Scotch with the joie de vivre of the Hawaiian and you have James Healani Mackenzie, the 24 year old leader of "Healani of the South Seas," heard each Thursday over a nation-wide network.

Charles Kullman, whose tenor voice blends in harmony Wednesday evenings with that of Jessica Dragonette, over CBS stations. Kullman's musical activities started when he deserted the medical profession at Yale University for the concert stage.

Born in Honolulu, the son of a native Hawaiian girl and a Scotch sugar planter, Mackenzie knocked around the world considerably before coming to the United States to see the World's Fair in 1933. He attended the University of Chicago, paying his way through by lecturing on the beauties of Hawaii, occasionally singing native songs to the accompaniment of the ukulele.

A friend suggested that he might add to his income by going into radio. So Mackenzie scoured the city for other Hawaiian musicians and located four whom he formed into an ensemble and auditioned for a network. He was immediately signed up with a weekly program.

Hay Driers Produce Better Hay

HAY driers are not yet feasible for the average farmer, but some operators of large farms and some few manufacturers make them pay, according to W. M. Hurst of the U. S. Bureau of Agricultural Engineering, who discussed the subject at the recent meeting of the American Society of Agricultural Engineers. Mr. Hurst is chairman of the Society's committee on forage drying.

The committee in a survey of Federal and State agencies and commercial concerns found that enough artificially dried hay was produced last year to fill the usual needs of nearly 50,000 dairy cows. They found 62 driers in use in 21 States that last year turned out nearly 90,000 tons of dried material. Pennsylvania had 9 driers; California 7; Ohio 6; Louisiana 5; Arkansas, Kansas, Nebraska and New Jersey 4 each; New York 3; Florida, Michigan, Minnesota and Oklahoma 2 each; and Indiana, Illinois, Montana, Missouri, Tennessee, Vermont, Washington and Wisconsin 1 each.

The farm crops dried by the owners reporting included alfalfa, corn, clover, lespedeza, oats, pasture grass, peas, soybeans, sudan grass, timothy, vetch and wheat. In Louisiana there was considerable drying of bagasse at the sugar mills for commercial purposes, and in California one owner dried seaweed. But 75 percent of the whole tonnage dried was alfalfa, most of it for meal.

The committee believes that for a long time most farmers will continue to use the sun to dry most of the hay—"unless very rapid progress is made in the development of driers or some important discovery is made," and that more immediate though less spectacular benefits may come to the average farmer through improvements in field curing.

Mr. Hurst called attention to the work of agricultural engineers at the Mississippi Agricultural Experiment Station and of other agricultural engineers which has shown that crushing of forage plants in the field to hasten drying offers a practical way to improve the quality of hay. He said that farmers are now getting better results from their feed than they did 10 or 20 years ago, but he believes engineers can assist them in getting still better results by providing ways and means to produce higher quality feed at lower cost.

BACK in 1797 New Jersey farmers rejected the first successful cast iron plow on the belief that cast iron poisoned the soil and promoted the growth of weeds.

LIGHTNING struck the barn of John Ingram, of Sheridan, Ark., destroying the structure and two mules. Putting faith in the old saying that lightning never strikes twice in the same place, Ingram rebuilt the barn in the same location. Four weeks later lightning again struck the barn, and destroyed it and the new mules.
Baltimore Sun (A.P.)

Appreciation

A commercial traveller put up for the night at a small country inn. In the breakfastroom the following morning he was asked by the landlord how he had enjoyed the cornet playing in the next bedroom during the night.

"Enjoyed it!" was the reply. "I should think not, indeed! Why, I spent half the night pounding on the wall to make that cornet lunatic stop."

"I'm afraid there's been a misunderstanding," said the landlord, stiffly. "The cornet player told me that the person in the next room applauded him so heartily that he played every piece he knew five times over."

What? How? Why?

Have you read all the manufacturers' advertising in this magazine? It will tell you What, How and Why electrical equipment can help you.

A review of the leading applications for electricity listed below should help you to determine what appliances should best serve to improve operations on your farm.

If our advertisers cannot give you all data and information you require, just fill out and send us the handy coupon at the bottom of this page. This service is FREE.

For Home
- ___Better Sight Lamps
- ___Clocks
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- ___Toasters
- ___Vacuum Cleaners
- ___Waffle Irons
- ___Water Heaters
- ___Water Softeners
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Gen'l Farm Equipment
- ___Auto Engine Heaters
- ___Corn Shellers
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- ___Feed Grinders
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- ___Hay Hoists
- ___Insect Killers
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- ___Drink. Fount. Warmers
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- ___Egg Graders
- ___Incubators
- ___House Lighting

For Truck & Fruit Farm
- ___Fruit Graders
- ___Fruit Washers
- ___Irrigation Equipment
- ___Light for Plant Growth
- ___Soil Heating
- ___Soil Sterilizers
- ___Stationary Spray Plants
- ___Vegetable Washers

For Farm Shop
- ___Bench Saws
- ___Drills
- ___Paint Sprayers
- ___Soldering Irons
- ___Tool Grinders
- ___Welders
- ___Woodworkers

FREE INFORMATION COUPON

ELECTRICITY ON THE FARM
Readers' Service Dept., 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying:

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My name is .....

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I get electricity from .....

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6 EXCLUSIVE ADVANTAGES
Raise more chicks and poults at lower cost in the Warner! Exclusive advantages include air-conditioning, no damp floors. Chromalox super-speed heating units, no fire worries. Ask your dealer.
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Grind your feed with electricity for as low as ½c per 100 pounds. Write for circular and prices of our Feed Grinders for automatic operation. They elevate grain and feed if desired.
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The only heater that fits any fountain, that drops into trough of 5-8-10-gal. round founts. Holds water at 50° in any weather—automatically—is 100% efficient, uses less than 1 k. w. h. in 24. Finest construction—absolutely guaranteed. We replace free any proving defective within 12 months. Price $3.00 Postpaid, or see your Dealer. Also, Electric Incubators, Electric Batteries with Natureized Contact Heat, famous Elect-O-Stat Brooders with or without fan.

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World's Largest Mfrs. of Brooders
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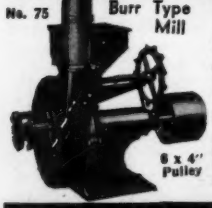
CUT Grinding Costs WITH THE STOVER FEED GRINDER
No. 75 Burr Type Mill


Grinds small grains and shelled corn for ⅓ less than custom mills. Saves its cost the first year, feeding seven cattle. Practical, rugged, compact. Operates with electric motor or gasoline engine—1 to 5 H.P. Grinds up to 25 bu. per hour.
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Grind your grain with a STOVER. Saves time, power and feed. Avoids waste and makes crops last until spring.
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Department E-600 FREEPORT ILLINOIS

Questions and Answers

Conducted by R. U. BLASINGAME

Cistern Filter Construction

Question: *I constructed a new cistern for rain water and would like to filter the water before it goes into the cistern. Can you tell me where to get plans for constructing a good filter?* F. H. B.

Answer: Plans and details for the construction of cistern filters are given in Farmers' Bulletin USDA No. 1448, "Farmstead Water Supply." This bulletin is for sale by the Superintendent of Documents, Washington, D. C., at a cost of 5c a copy.

One Wire Circuit

Question: *I have been told that it is possible to extend service from the entrance box by using one wire and completing the circuit through the ground. Is this method practical?* S. W.

Answer: It is not practical to conduct current to your barn by using one wire and a ground return. Such circuits have been tried in isolated locations but give unsatisfactory service and interfere greatly with telephone communication. There is no satisfactory substitute for complete wire circuits at the present time.

Difficulty with Range

Question: *I bought a used electric stove that is made for and has been used on a 25 cycle electric line. Our electric line is a 60 cycle one. The stove heats all right but when I use the thermostat on the oven there is a humming noise. The largest burner also has a slight hum. Is there any way to correct this?* F. A. H.

Answer: Generally an electric stove made to operate on 25 cycle alternating current may be used with 60 cycle current of the same voltage.

It is possible that the thermostat on your stove is worn out and causes the humming noise. You should write to the manufacturer giving the serial number of the stove and he can advise you if the thermostat or switches should be replaced in order to make it operate satisfactorily on 60 cycle current.

He was at the fountain pen counter making a purchase. "You see," he said, "I am buying this for my wife."

"A surprise, eh?"

"I'll say so. She is expecting a Packard."

Two salesmen were playing whist when Jake looked at his hand and said:

"Turn this into a poker game and give me a Queen and I'll bet $10 on this hand.

Clutching his facial muscles with his masterly will, Al countered:

"Sure, but let's make it interesting. Bet you $50 instead of ten. Here's your Queen."

The money was put up. Al laid down four Kings. Jake laid down four aces.

Four hours later, Al was found at the table ruminating over Jake's hand. Finally he gave it up.

"I'll be doggoned and blistered if I can see why he wanted that Queen."

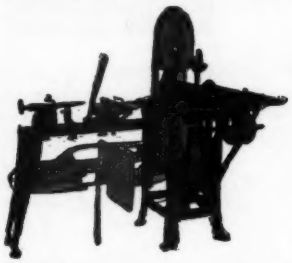
What's New

Reviewed by T. E. HIENTON

Names and addresses of manufacturers of the articles described in this column will gladly be furnished upon request. Address your requests to What's New Department, ELECTRICITY ON THE FARM, *24 West 40th Street, New York, N. Y.*

Electric Wood-Working Machine

To build or not to build the new brooder house, colony hog house or other structures of wood on the farm or to have it done by a carpenter or at the lumber yard usually depends upon machines available to the farmer for cutting and shaping the necessary lumber. The very nature of farming makes a mechanic of the operator and where he has machines available to assist in his work he is frequently able to do much of his small building and repair work.



A new machine, labeled an electric carpenter, has been recently placed on the market by an eastern firm. This machine, which is usually equipped with a ½-horsepower, 110-220 volt, single phase motor, is listed by the manufacturer to perform the work of seven machines. These include saw table, jointer, band saw, shaper, speed spindle, mortiser and lathe for wood turning.

Sectional Cold Rooms

Cold storage rooms are in use on farms for storing a variety of products, milk, eggs, cream, poultry, cider, and fresh fruits and vegetables. Their use enables their owners to sell at retail the articles produced on the farm, frequently at a greater return than would be otherwise possible.

Two eastern manufacturers of farm electrical

Speediest . . . Easiest to Handle

COW CLIPPER

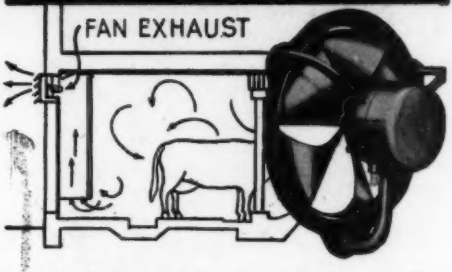
World-Famous

STEWART CLIPMASTER

Over 90% of the world's clipper users own and PREFER STEWART clippers. **CLIPMASTER is faster, cooler running, easier-to-use. The most powerful clipper of its kind ever made.** Lasts longer. Stays sharp longer. Fan-cooled, ball-bearing motor exclusive Stewart design. Completely insulated in the special **EASY-GRIP** handle barely 2 inches in diameter. The finest, most enduring clipper ever made for cows, horses, dogs, mules, etc. **A $25.00 value for only $17.95** complete. Slightly higher west of Denver. 100-120 volts. Special voltages slightly higher. At your dealer's or send $1.00. Pay balance on arrival. Send for FREE catalog of Stewart electric and handpower Clipping and Shearing machines. Made and guaranteed by Chicago Flexible Shaft Company, 5524 Roosevelt Road, Chicago, Illinois.

47 Years Making Quality Products.

ELECTRIC VENTILATION
FOR YOUR DAIRY BARN



The simple installation of an Ilg Electric Exhaust Fan in your dairy barn will make a world of difference in the health of your cows. It provides positive ventilation, helps to control the temperature and keep the barn dry—takes out the bad air, brings in the fresh air. Air circulation and volume are automatically controlled.

Ilg Electric Ventilation is modern, economical ventilation and it costs much less to install than gravity ventilation. For all-year-round barn comfort, healthier cows and increased profits, investigate Ilg Electric Ventilation—ask your utility company, or send for special bulletin.

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New Low Terms

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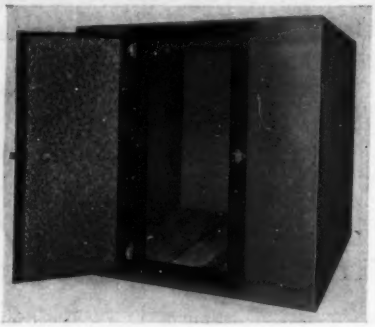
$85 LESS MOTOR DRIVE

WRITE for details on this new 9" x 3' Workshop Precision Lathe, back geared, screw cutting. Made in 8 different drives, 4 bed lengths. 28 practical attachments available for use with this lathe. Weight 320 lbs. crated. **Ask for catalog 18K—sent Free, Postpaid.**

SOUTH BEND LATHE WORKS

328 E. Madison Street **South Bend, Indiana, U. S. A.**

equipment are now offering sectional cold rooms ready for installation. These are available in several types and a number of different sizes. They

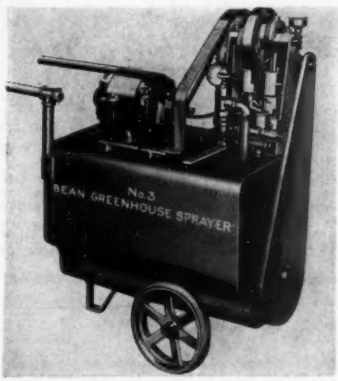


may be obtained with different thicknesses of insulating material and are shipped knocked down but complete and ready for erection. The inside dimensions of three different sizes made by one company are width 72 inches, height 73 inches, and lengths of 33, 72 and 111 inches respectively.

Greenhouse Sprayer

Greenhouse crops need very careful attention because of the conditions under which they are grown. Their value to the grower warrants particular attention, especially protection against insects and plant diseases. Spraying is relied upon in most instances to provide this protection and where electric service is available electric power frequently operates the sprayer.

A greenhouse sprayer has been developed by a



spray pump manufacturer. This unit is portable with wheels 10½ inches in diameter and solid rubber tires 2⅛ inches wide. Pneumatic rubber tires are optional at extra cost. A ¾-horsepower motor will drive the 2-cylinder pump which will provide 3½ gallons per minute at a pressure of 300 pounds. A 30-gallon tank is provided with the pump, the entire outfit weighing 225 pounds.

Electric Dairy Water Heater

Hot water at just the necessary temperature is made available more easily with an electric heater than with any of the others commonly used on dairy farms. The thermostatically controlled heater requires little attention from the operator even on non-pressure type units, leaving him free for other tasks.

A 10-gallon electric dairy water heater of the non-pressure type is a new development of a middle western manufacturer. The tank is insulated with three inches of rock wool on sides and bottom and with four inches on top. Hot water is drawn out of the heater at the top when cold water is added. Water temperature is automatically regulated by an adjustable thermostat.

THE U. S. Bureau of the Census reports that 15,526 water systems and 41,322 domestic pumps were shipped during the month of August. That's 56,848 happier families.

THE Egyptian Ministry of the Interior has announced that electric advertising space is to be let on the Pyramids. ... .—Le Matin (Paris).

CLASSIFIED ADVERTISING

ELECTRIC SUPPLIES FOR POULTRYMEN—Manufactured by the most experienced manufacturer of electrical poultry equipment. Modern fan brooders, fly electrocutors, incubators, burglar and fire alarms, water heaters, time switches, thermostats, etc. The Lyon Line gives reliable performance at low cost. Write for FREE catalog. LYON ELECTRIC CO., Dept. EF, San Diego, California.

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HAVE YOU A SOUND, PRACTICAL INVENTION for sale, either patented or unpatented? New ideas can now be safely sold without patenting expense. We have been successfully helping others since 1924. Write for proof and tell us what you have for sale. CHARTERED INSTITUTE OF AMERICAN INVENTORS, Dept. 108, Washington, D. C.

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The National Magazine for Furthering Rural Electrification

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OCTOBER COVER

RULES
DECEMBER CONTEST

Seven cash prizes will be awarded for the best titles to the picture on the front cover of this magazine.

The first prize will be $20 cash; the second prize $5.

In addition, five consolation prizes of $3 each will be awarded for the best title from each of these five geographic sections of the country: 1—New England, 2—Middle and South Atlantic States, 3—East Central (Ohio, Ind., Ill., Mich., Wis., Ky., Ala., Tenn., Miss.), 4—West Central (Minn., Ia., Mo., N. D., S. D., Neb., Kans., Ark., La., Okla., Tex.), 5—Mountain and Pacific (other far western states).

In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

Titles should be brief—the shorter the better.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Question "A" must be answered.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 6 North Michigan Avenue, Chicago, Illinois, before January 1st.

Winning names and titles will be announced in the February issue.

Send your title on the coupon or make out a similar form on a plain sheet of paper or government postcard.

TITLE CONTEST

Awards for October Titles

FIRST PRIZE—$20.00 CASH

"A switch approved by son—the switch to running water."

HELEN KLINE,
R.F.D. 1, READING, KANS.

SECOND PRIZE—$5.00 CASH

"Electricity makes a 'Fountain of Youth' out of the old pump."

MRS. P. J. CHRISTIANSEN,
R.F.D. 1, BENNINGTON, NEB.

Five Sectional Prizes—$3.00 Each

"Water, electrically run, is best for you, my son."
RICHARD W. STUART, R.F.D. 3, Box 55, Bangor, Maine

"Water boy fired, electricity hired."
BERNIE F. BERLY, Box No. 14, Prompton, Penn.

"Electricity is the 'waterboy' on this farm."
BETTY HAMRICK, R.F.D. 2, Bidwell, Ohio

"Just one swish! and water if you wish."
MRS. ALBERT STARK, R.F.O. 5, Box 46, West Duluth, Minn.

"It's the same good water son, electricity is what makes it run."
MRS. CHAS. D. WARD, R.F.D. 1, Idaho Falls, Idaho

My title for the December Front Cover picture of ELECTRICITY ON THE FARM is.....

.....

(a) In doing the daily chores how much time have you found it saved with electric lights over the kerosene lantern way? Old Way.....hours. Electric Way..... hours.....

.....

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My Name Is.....R. F. D.....

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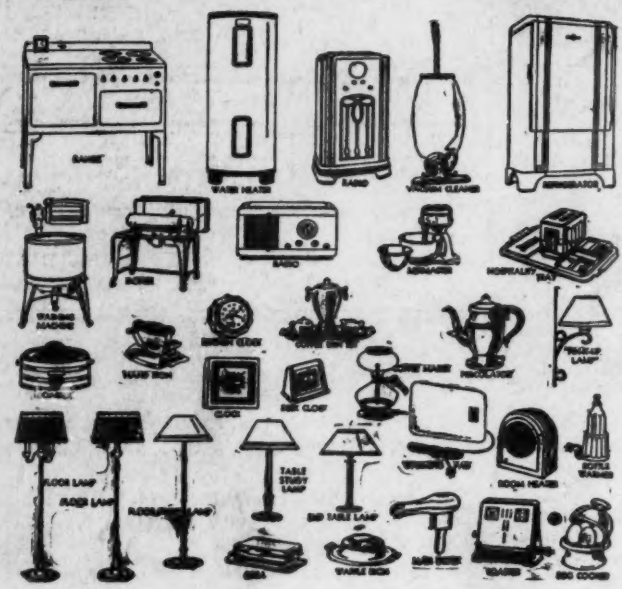

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